CLAIMS

What is claimed is:

1.   In a system comprising at least one mobility server, at least one edge mobility agent and a plurality of mobile nodes, a method for local routing between two mobile nodes comprising the steps of:

    receiving a first care-of address for a first mobile node;

    detecting an edge mobility agent having knowledge of said first care-of address;

    determining, based upon at least one condition, that the edge mobility agent can perform local routing of at least one datagram for said first mobile node; and

    instructing said edge mobility agent to perform local routing of at least one datagram between said first mobile node and a second mobile node that has a second care-of address that is known to said edge mobility agent.

2.   The method of Claim 1, wherein said method is implemented using standard mobile internet protocol.

3.   The method of Claim 1, wherein said first care-of address is included in a registration request from said first mobile node.

4.   The method of Claim 3, wherein said edge mobility agent is instructed to perform local routing via a registration reply responsive to said registration request.

5.   The method of Claim 1, wherein said at least one condition includes at least one of:

detecting that said edge mobility agent is configured for performing local routing; and

detecting a need for local routing for said first mobile node.

6.   The method of Claim 1 further comprising communicating to said edge mobility agent at least one local routing condition.

7.   The method of Claim 1 further comprising:

detecting at least one change in local routing for said first mobile node; and

notifying said edge mobility agent of said at least one change in local routing for said first mobile node.

8.   The method of Claim 7, wherein said at least one change in local routing is based on a new first care-of address for said first mobile node.

9.   The method of Claim 8 further comprising:

detecting a second edge mobility agent having knowledge of said new first care-of address;

determining, based upon at least one condition, that the second edge mobility agent can perform local routing of at least one datagram for said first mobile node; and

instructing said second edge mobility agent to perform local routing of at least one datagram between said first mobile node and a third mobile node that has a third care-of address that is known to said second edge mobility agent.

10.   The method of Claim 1, wherein said edge mobility agent is one of a foreign agent, a mobile router and an edge router.

11.   In a system comprising at least one mobility server, at least one edge mobility agent and a plurality of mobile nodes, a method for local routing between two mobile nodes comprising the steps of:

5   receiving in an edge mobility agent an indication of a first care-of address for a first mobile node; and

determining, based upon at least one condition, that local routing of at least one datagram can be performed between said first mobile node and a second mobile node that has a second care-of address that is known to said edge mobility

10   agent.

12.   The method of Claim 11, wherein said method is implemented using standard mobile internet protocol.

15   13.   The method of Claim 11, wherein said determination that local routing can be performed is based on an instruction received from a mobility server.

14.   The method of Claim 11, wherein said determination that local routing can be performed is made by said edge mobility agent.

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15.   The method of Claim 11, wherein said at least one condition includes detecting a need for local routing for said first mobile node.   .

16.   The method of Claim 11 further comprising performing local routing for

25   said first mobile node.

17.   The method of Claim 16, wherein said step of performing local routing includes adding said first mobile node to a local routing list.

18.   The method of Claim 16, wherein said step of performing local routing includes:

receiving a first datagram from said first mobile node to said second mobile node;

5   determining that said first datagram can be locally routed; and

locally routing said first datagram from said first mobile node to said second mobile node.

19.   The method of Claim 16 further comprising detecting at least one change

10   in local routing for said first mobile node.

20.   The method of Claim 11, wherein said edge mobility agent is one of a foreign agent, a mobile router and an edge router.

15   21.   The method of Claim 11 further comprising notifying a mobility server that local routing of at least one datagram can be performed for said first mobile node.

22.   The method of Claim 21, wherein said mobility server is a home agent.

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23.   In a mobile internet protocol enabled system comprising at least one home agent, at least one edge mobility agent and a plurality of mobile nodes, a method for local routing between two mobile nodes comprising the steps of:

receiving in an edge mobility agent an indication of a first care-of address

25   for a first mobile node;

determining, based upon at least one condition, that local routing of at least one datagram can be performed for said first mobile node;

notifying a home agent that local routing of at least one datagram can be performed between said first mobile node and a second mobile node that has a

30   second care-of address that is known to said edge mobility agent.

24.   In a system comprising at least one mobility server, at least one edge mobility agent and a plurality of mobile nodes, a method for local routing between two mobile nodes comprising the steps of:

receiving in an edge mobility agent an indication of a first care-of address for a first mobile node;

determining, based upon at least one condition, that local routing of at least one datagram can be performed for said first mobile node; and

notifying a mobility server that local routing of at least one datagram can be performed between said first mobile node and a second mobile node that has a second care-of address that is known to said edge mobility agent.

25.   A mobility server configured for performing the method of Claim 1.

26.   An edge mobility agent configured for performing the method of Claim 11.